

REMARKS

The rejection has been considered at length. However, for the reasons set forth below, it is believed that the claimed subject matter would not have been rendered obvious by the combination of the cited references.

Claims 1, 3-5 and 8-35 are pending, and claims 1, 3-5, 8-10, 12, 17-22 and 34-35 have been examined on the merits.

The Examiner has maintained the 35 U.S.C. § 103(a) rejection of claims 1, 3-5, 8-10, 12, 17-22 and 34-35 over Yamada in view of Saito and further in view of Otto.

Applicants respectfully traverse.

As previously submitted, the presently claimed invention is directed to a method for applying a hybrid coating to a substrate.

The combination of the teachings of Yamada and Saito has been previously addressed. The Examiner is now making the claims that the disclosure of Otto should be read in light of the reference Kersten et al. (hereinafter "Kersten") disclosed therein (e.g., col. 2, lines 46-49).

Kersten describes a method for coating with a pulsed plasma. However, as also recognized by Otto, Kersten discloses that this process functions at temperatures of 850⁰ C and higher.

According to Otto "even substrates which are not stable to temperature can be deposited during a pulse of high power because a pulse interval follows each power pulse" (e.g., col. 2, lines 52-56). Thus, Otto concludes that high coating rates are possible without significant temperature loading of the substrate.

However, it should be noted that such a “cooling” had not been envisaged by Kersten (*see* Figure 14), since the substrate to be coated is contained within the coating apparatus which is surrounded by a furnace providing for high temperatures within the device.

Thus, it is not clear how Otto could arrive at the conclusion, starting from the device described in Kersten, that cooling of the coating temperature can be achieved by prolonging the pulse interval time.

Further, for the reasons set forth below, prolonging the interval time has only minimal effects on the temperature of the substrate. For example, if a high electron density plasma, needed to produce the vapor to be deposited on the substrate and containing an inorganic compound, is used, it would be very impractical, if not impossible, to sufficiently cool the substrate between the pulses of the plasma.

Thus, it is submitted that Kersten, even if interpreted in light of Otto, cannot remedy the shortcomings mentioned with regard of the combination of Yamada with Saito.

Accordingly, it is respectfully submitted that the pending claims are all patentable over the combination of the four references, because, for the reasons set forth above, it would not have rendered obvious the claimed subject matter.

This response is being filed within the shortened statutory period for response, thus, no fees are believed to be due. If, on the other hand, it is determined that further fees are necessary or any overpayment has been made, the Commissioner is hereby authorized to debit or credit such sum to Deposit Account No. 02-2275.

Pursuant to 37 C.F.R. § 1.136(a), please treat this and any concurrent or future reply in this application that requires a petition for an extension of time of its timely submission as

incorporating a petition for extension of time for the appropriate length of time. The fee associated herewith is to be charged to the above-mentioned deposit account.

An early and favorable action on the merits is earnestly solicited.

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Respectfully submitted,

LUCAS & MERCANTI, LLP

By: /Silvia Salvadori/

Silvia Salvadori Esq. Reg. No. 48,265
LUCAS & MERCANTI, LLP
475 Park Avenue South
New York, New York 10016
Tel: 646-783-6758
Fax: 212-661-8002